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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/756,392	01/14/2004	Hiroaki Matsumoto	02410287US	1887

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GREENBLUM & BERNSTEIN, P.L.C.
1950 ROLAND CLARKE PLACE
RESTON, VA 20191

EXAMINER

WILLIAMS, THOMAS J

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 05/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/756,392

Applicant(s)

MATSUMOTO, HIROAKI

Examiner

Thomas J. Williams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Acknowledgment is made in the receipt of the amendment filed April 22, 2005 and the change of address filed April 25, 2005.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Regarding claims 1-13, the recitation "after a load applied ahead of the vehicle is released" is not clearly defined in the specification. As such it is unclear to the examiner what the applicant is attempting to define.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 10, 11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,632,535 to Luckevich et al.

Re-claims 1 and 13, Luckevich et al. disclose a brake control apparatus, comprising: a brake pressure controlling unit (see figure 2); a control unit 62 performs brake force distribution control, Luckevich et al. go on to disclose a situation wherein the normally open valves for the

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rear wheels are opened and the distribution control is terminated immediately after the vehicle speed has reached a low speed limit, see column 5 lines 65-67. This is similar to the second situation disclosed by the applicant regarding figure 2 in the instant invention, wherein the dotted line indicates the termination of brake force distribution immediately after the vehicle speed reaches a low limit V_0 and described on page 14 paragraph 2. It is anticipated that the termination process in Luckevich et al. will occur after a load applied ahead of the vehicle is released.

Re-claims 2 and 3, the brake force distribution is terminated after the vehicle or wheel speed reaches a low limit.

Re-claim 10, see figure 2.

Re-claim 11, Luckevich et al. disclose a situation in which the brake force distribution is terminated once the vehicle stops. It is unclear what the difference is between a stopped vehicle and a completely stopped vehicle.

7. Claims 1, 4, 5, 10, 11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,938,299 to Hara et al.

Re-claims 1, 11 and 13, Hara et al. discloses a brake control apparatus, comprising: a brake pressure controlling unit (see figure 2); a control unit 60 performs brake force distribution control, brake force distribution is terminated when the vehicle speed or wheel speed falls below a low speed (see step 4, column 7 lines 50-53, this is similar to the dotted line situation in instant figure 2 as stated above) or wherein the distribution control is terminated after the vehicle has stopped and a load applied to the pedal is released (step 1, see column 7 lines 42-44), in either case the appropriate valves are opened.

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Re-claims 4 and 5, the brake force distribution is terminated after an estimated deceleration is reduced to be smaller than a predetermined deceleration from when a wheel speed, or vehicle speed, is smaller than a predetermined value, see column 7 lines 53-56.

Re-claim 10, see figure 2.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luckevich et al.

Re-claims 6 and 7, Luckevich et al. teaches the predetermined time frame as 1 second and not 300 msec. It would have been obvious to one of ordinary skill in the art as a matter of design choice to have reduced the time frame to 300 msec., since the applicant has not disclosed that having the predetermined time set at 300 msec. solves any stated problem or serves any particular purpose and it appears that the system of Luckevich et al. would have performed equally well with the predetermined time set at 300 msec. The reduced time would have allowed for quicker equalization of the cylinder pressures with the master cylinder.

Re-claim 8, Luckevich et al. teaches the predetermined wheel speed as being 2 km/h. It would have been obvious to one of ordinary skill in the art as a matter of design choice to have set the predetermined wheel speed at 2 km/h, since the applicant has not disclosed that having the predetermined wheel speed set at 2 km/h solves any stated problem or serves any particular

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purpose and it appears that the system of Luckevich et al. would have performed equally well with the predetermined wheel speed set at 2 km/h.

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hara et al.

Hara et al. teaches the predetermined wheel speed set at 6 km/h. and not at 2 km/h. It would have been obvious to one of ordinary skill in the art as a matter of design choice to have reduced the predetermined wheel speed to 2 km/h, since the applicant has not disclosed that having the predetermined wheel speed set at 2 km/h solves any stated problem or serves any particular purpose and it appears that the system of Hara et al. would have performed equally well with the predetermined wheel speed set at 2 km/h.

11. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Luckevich et al. or Hara et al. in view of US 6,030,056 to Sawada et al.

Luckevich et al. and Hara et al. fail to specifically teach terminating the brake force distribution at a swing back time. Sawada et al. teach a system for terminating brake force distribution at a swing back time, which is the period immediately before the vehicle stops. This would seem to coincide with the period immediately after the vehicle speed falls below the low speed limit, at which time the brake force distribution is terminated. Thus it would seem the swing back time is the time just prior to a complete stop. Therefore it would have been obvious to one of ordinary skill in the art to have provided either Luckevich et al. or Hara et al. with a brake force terminating procedure coinciding with the swing back time as taught by Sawada et al., thus preventing any discomfort for the passengers in the vehicle by preventing swing back.

Response to Arguments

12. Applicant's arguments filed April 22, 2005 have been fully considered but they are not persuasive. As understood by the examiner the brake force distribution is finished or terminated as a vehicle stops *and* after a load applied ahead of the vehicle is released. It is the opinion of the examiner that the recitation "after a load applied ahead of the vehicle is released" does not clearly distinguish over the art of record. Firstly this concept is not clearly distinguished in the instant application as stated above. The examiner agrees with the applicant that the specification does provide antecedent basis for the limitation, which merely means that the limitation is mentioned in the specification. However, the specification does not go into detail what this concept is or how it applies to the prior art. The applicant is required to fully disclose the concepts of the claimed invention. As such the examiner must rely upon the figures for clarification. As stated in the above rejection figure 2 in the instant application illustrates two scenarios. In a first scenario, as denoted by the solid line, the brake force distribution is terminated at a point in time that appears to be after the vehicle has stopped. In a second scenario, as denoted by the dotted line, the brake force distribution is terminated at a point in time that is after a vehicle speed falls below a predetermined threshold but before the vehicle stops. The second scenario appears to best illustrate independent claims 1 and 13. In either scenario it is unclear when the operation "a load applied ahead of the vehicle is released" occurs. Both Luckevich et al. and Hara et al. disclose a situation in which the brake force distribution is terminated when the vehicle falls below a predetermined speed and before the vehicle stops. The systems of Luckevich et al. and Hara et al. seem to mimic the second scenario in the instant

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application. Thus as best understood by the examiner both Luckevich et al. and Hara et al. anticipate the claim language.

The arguments submitted April 22, 2005 appear to define the concept “after a load applied ahead of the vehicle is released” as swing back. Which is further defined by instant claims 2 and 3. These claims appear to define the time frame between when a vehicle speed falls below a low threshold and just before the vehicle actually stops as being the time when the step “a load applied ahead of the vehicle is released” is conducted. Thus it would seem that the brake force distribution is terminated just prior to when the vehicle comes to a complete stop, which is represented in figure 2 as when the wheel speed reaches a speed of zero. This occurs shortly after the wheel speed falls below V_0 in figure 2 and shortly after the dotted line rises up to meet the solid line. Thus again it appears that the second scenario best describes the instant invention. This provides further support for the anticipation of the above claims in view of Luckevich et al. and Hara et al.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). New claim 12 required a further search and rejection.

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Thomas Williams whose telephone number is 571-272-7128. The examiner can normally be reached on Monday-Thursday from 6:30 AM to 4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Bucci, can be reached at 571-272-7099. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-6584.

TJW

May 10, 2005

THOMAS WILLIAMS
PATENT EXAMINER

Thomas Williams
AU 3683
5-11-05